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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,469	10/28/2003	Varghese George	42P17017	6926

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EXAMINER

PATEL, ANAND B

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/696,469	Applicant(s) GEORGE ET AL.	
	Examiner Anand Patel	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 7-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Response to Restriction filed 7/10/06 has been entered and as such Group I (claims 1-6) has been elected.

Drawings

2. The drawings are objected to because the unlabeled rectangular boxes shown in figure 4 should be provided with descriptive text labels and "TM2" in figure 2 needs to be further explained. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 208. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the

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figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. It should also be noted that according to figure 1, at $V=0$, the ratio is 0. According to paragraph 15 of the specification, the ratio should never be below the min ratio. This discrepancy needs to be addressed in this figure.

Specification

5. The disclosure is objected to because of the following informalities: there is no Brief Summary of the Invention.

Appropriate correction is required.

Claim Objections

6. Claim 5 is objected to because of the following informalities: the phrase "the bus ratio" lacks proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-3, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No 5812860 to Horden et al (Horden).

- As per claim 1, Horden discloses a method for operating a integrated device within an operating range comprising:
 - Enabling a reduced power operating mode in response to a predetermined condition for the integrated device (column 2, lines 8-25; column 4, lines 12-37);
 - Changing the integrated device's voltage from a first voltage to a second voltage upon activation of the reduced power operating mode (figure 2c; column 4, lines 34-37); and
 - Operating the integrated device at a frequency within the operating range based at least in part on a desired amount of power reduction (figure 2c; column 4, lines 34-37).
- As per claim 2, Horden discloses the method wherein the first voltage is a nominal operating voltage (2.75V) and the second voltage is a reduced voltage (2V) that is defined during manufacturing of the integrated device (column 4, lines 1-5).
- As per claim 3, Horden discloses the method wherein the predetermined condition is either one of a thermal issue or a power issue (column 4, lines 23-30).
- As per claim 6, Horden discloses the method wherein the integrated device is a processor (1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horden, in view of US Patent No 6772356 to Qureshi et al (Qureshi).

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- As per claim 4, Horden fails to disclose wherein the second voltage is stored in fuses. Qureshi teaches wherein a voltage is stored into a plurality of fuses (column 4, lines 20-23). An advantage of the system is the ability to modify voltage and frequency settings to increase power savings (column 2, lines 36-43). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Horden with the storage of voltage in fuses as taught by Qureshi. Motivation to modify is to decrease power requirements.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horden, in view of US Patent No 6385735 to Wilson et al (Wilson).

- As per claim 5, Horden fails to disclose details of bus ratios. Wilson discloses wherein the bus ratio utilized in the power reduction operating mode is less than a maximum bus ratio for the integrated device and is calculated based on subtracting an offset from the maximum bus ratio, the offset is based at least in part on the supported bus frequency of the integrated device (column 5, lines 10-15, 17-50; column 6, lines 20-36). An advantage of the system taught by Wilson is the ability to protect processor cores while allowing adjustments to maximum clock frequencies (column 2, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Horden with the bus ratio system as taught by Wilson. Motivation to modify is to increase system flexibility.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent No 6141762 to Nicol et al discloses varying frequency/voltage settings to maximize power savings.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Patel whose telephone number is (571) 272-7211. The examiner can normally be reached on Mon-Fri 8AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ABP


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